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INDUSTRY AND THE URUGUAY ROUND

VOLUME 5

Resource Equipment

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INDUSTRY AND THE URUGUAY ROUND

VOLUME 5

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RESOURCE EQUIPMENT

Overview

Importance to Canada

The Canadian resource equipment sector comprises a number of different types of industries, including manufacturers of equipment for agriculture, materials handling, construction, mining, forestry, and oil and gas fields.

Typically, Canadian production by both large and small companies is limited to a narrow range of equipment, and tends to focus on custom-engineered machinery. Resource equipment manufacturers are concentrated in Ontario and Quebec, and to lesser extent in Alberta and British Columbia.

The majority of companies in the sector are small and owner-operated. While the sector can be characterized as Canadian-owned, in most industries there are large foreign-based multinational enterprises (MNEs) that can be expected to continue playing an important role in determining the performance and direction of the industry.

In 1992, resource equipment producers had shipments estimated to be in excess of $3.1 billion, with exports accounting for $1.6 billion. Sector employment in 1992 was estimated to be some 29 000 persons.

Strengths and Weaknesses

While this paper focuses consideration on certain major industry segments of the resource equipment sector, there are competitive strengths and weaknesses that are common to a most resource equipment industries.

The resource equipment sector in Canada recognizes that it is not possible to satisfy the demand for the broad and diverse range of machinery and equipment required by the Canadian market. Accordingly, over the years, the sector has evolved into one that serves only those markets segments or niches in Canada and abroad in which it can competitively manufacture products. Generally these are in areas where custom design and engineering are particularly important. Because the sector has evolved in this manner, there are significant gaps in Canada's machinery and equipment manufacturing capabilities. Those gaps appear generally in products where production economies of scale cannot be achieved in the domestic market. These gaps are likely to be further emphasized as the industry adapts to the effects of the increasing internationalization of markets by narrowing the range of products manufactured, thereby obtaining greater concentration of effort and further economies of scale.

Despite the small size of the Canadian firms involved, the resource equipment sector has several strengths that enable it to compete in the domestic and international marketplace.

One of the sector's main competitive advantages lies in the flexibility of the majority of its firms. This flexibility has enabled firms to rapidly identify and exploit market niches and respond quickly to the individual requirements and specifications of customers. This strength

has resulted in considerable expertise in such areas as specialized machinery for use on large farms under dryland farming conditions, versatile earth-moving machinery for the construction industry, forest harvesting equipment, and specialized drilling equipment for oil and gas.

A second significant competitive advantage enjoyed by this sector is its ability to custom design equipment and machinery. This enables the sector to adapt to changes in customer requirements much more quickly than the large multinationals. This "one-off" ability to custom design to client specifications has been effective in establishing Canadian beachheads in markets traditionally served by foreign competition.

The sector developed these strengths and capabilities despite being faced with several major challenges such as high levels of foreign ownership, limited research and development conducted in Canada, and the high cost of capital for acquiring technology and modernizing plants.

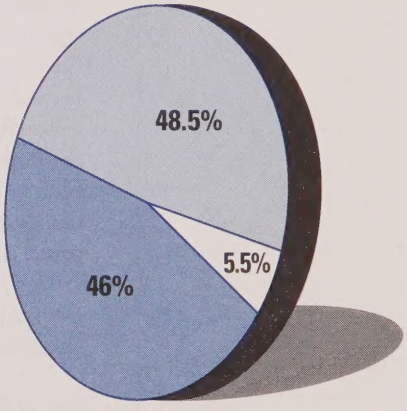
Agricultural Machinery

Importance to Canada

The Canadian agricultural machinery industry encompasses manufacturers of a wide range of farm machinery, including four-wheel-drive tractors, combine harvesters, seeding and tillage equipment, hay handling and harvesting equipment, and grain handling and storage equipment. This specialized machinery is used in the production of cereal grains on large farms under dryland prairie farming conditions. In addition, Canadian firms also produce specialized equipment for particular crops (e.g. tobacco, potatoes and sugar beets).

Total factory shipments are estimated at $865 million in 1992, the most recent year for which shipments data are available, with exports of $467 million accounting for a little over 50 percent of this amount. The United States was the main destination of exports, receiving 90 percent, with the major exports being four-wheel-drive tractors, tillage and seeding equipment and swathers. The Prairie provinces are the dominant region for farm machinery production, although there is considerable activity in Ontario and Quebec.

Figure 1
Destinations of Agricultural Machinery Shipments, 1992



Strengths and Weaknesses

The principal strength of the Canadian agricultural machinery industry lies in the economies of scale that have resulted from its favourable access to the U.S. market. Trade in agricultural implements between Canada and the United States has been essentially duty-free since 1944, and this has enabled Canadian producers to

Trade Patterns and Performance

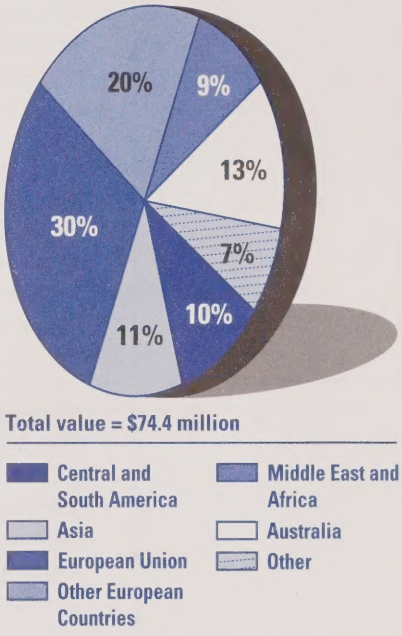
exploit economies of scale available in the total North American market. In addition, some firms in the Canadian industry have increased their competitiveness by developing products suited to the particular conditions of dryland farming in North America.

The trend to globalization offers an opportunity to farm machinery manufacturers, as Canadian dryland farming technology is at the leading edge and in demand in all the major countries that grow cereal grains under large-scale dryland farming conditions. At the same time, however, Canadian-designed equipment is not always suited to the type of crops and agricultural practices of other countries, a fact that limits markets for Canadian agricultural equipment exports abroad.

In 1993, the industry's total exports were $748 million, with $674 million destined for the United States. At the same time, exports to non-North American countries totalled $ 74.4 million, of which countries of the European Union (EU) accounted for 30 percent, other European countries some 20 percent, and Australia close to 13 percent.

The U.S. will continue to be Canada's largest market, but substantial opportunities for growth exist in Australia, Mexico, the EU, China, Russia, Ukraine and Kazakhstan.

Figure 2
Agricultural Machinery Exports to Non-NAFTA Destinations, 1993



In 1913, the United States removed its import duties on most agricultural machinery. Canada followed suit in 1944, thereby creating a free trade environment between the two countries for those products. While a small number of items remain dutiable, they are for products that have uses that are not strictly agricultural, such as small tractors that could be used by non-farmers or hobby farmers. Most of these products may qualify for duty-free treatment if it is verified that they meet agricultural end-use requirements. Both countries have instituted certification procedures for this purpose.

Canada and the United States similarly extend duty-free access to agricultural machinery from all countries accorded most favoured nation (MFN) tariff status. Despite enjoying tariff-free access to Canada and the United States, many of these countries have maintained tariffs on agricultural equipment entering their own markets. For example, barriers against Canadian tractor and tillage equipment have made it difficult for Canadian manufacturers to compete in the EU; tariffs on agricultural equipment entering the EU range from 3.5 to 8.5 percent. Duties facing agricultural equipment into Australia range between free and 25 percent.

Under the Canada-U.S. Free Trade Agreement (FTA), any remaining Canadian and U.S. duties on agricultural machinery will be eliminated by January 1, 1998.

Under the North American Free Trade Agreement (NAFTA), most Mexican duties on agricultural equipment, which ranged between 10 and 20 percent before the agreement, and remaining Canadian duties applicable to Mexican imports, were eliminated on implementation of the agreement on January 1, 1994.

Impact of the GATT Uruguay Round

The Uruguay Round of negotiations under the General Agreement on Tariffs and Trade (GATT) can be expected to have positive impact on the Canadian agricultural machinery sector in its efforts to exploit world markets. Numerous industrialized countries, including the European Union, have agreed to eliminate duties by 1998 for key products such as soil preparation and cultivation machinery, harvesting and threshing machinery, milking machines and dairy equipment, and agricultural tractors. Improved access to European markets will provide new market opportunities for Canadian firms, enabling them to diversify into markets beyond the U.S. Expanding into new markets is needed for the long viability of the industry in order to ensure increasing demand for Canadian-produced equipment.

Other important country markets also will provide improved access beneficial to Canadian agricultural machinery exporters. For example, most Australian duties for agricultural machinery will be reduced to free and 5 percent from current rates ranging from 15 to 25 percent. In addition to eliminating and reducing duties, the Uruguay Round negotiations resulted in significant gains in securing market access through tariff bindings. The binding of country tariffs, particularly those of developing countries, is an important achievement of the Uruguay Round, as it prevents countries from raising their tariffs.

While virtually all agricultural machinery has entered Canada duty-free for more than 40 years, those duties that do remain will be eliminated or reduced over a five-year period.

The Uruguay Round's Agreement on Technical Barriers to Trade encourages countries to use international standards. The agreement, which will reduce the ability of countries to use technical regulations and standards or testing and certification procedures to obstruct trade, should prove beneficial to Canadian agricultural machinery exporters.

Table 1

Value of Exports and Foreign Tariff Rates on Agricultural Machinery,[a] Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Exports, 1993	European Union Tariff Rates		Australia Tariff Rates		New Zealand Tariff Rates	
			Before	After	Before	After (bound)	Before	After (bound)
		($ millions)	(percent)					
8432	agricultural, horticultural or forestry machinery for soil preparation or cultivation	230.3	3.5	free	free to 25 (bound and unbound)	free (unbound)	free to 25	free to 20
8433	harvesting or threshing machinery, including straw or fodder balers; grass or hay mowers; machines for cleaning, sorting or grading eggs, fruit, etc.	153.5	3.5	free	15 to 25 (bound and unbound)	free to 5	free to 25 (unbound)	free to 16.5
8436.21	poultry incubators and brooders	12.5	3.8	1.7	15 (bound)	5	20 (unbound)	16.5
8701.90	agricultural and forestry tractors	225.0	8.5	free	25 (unbound)	free	5	free

[a] The HS codes, product descriptions and figures shown may include products of this sector as well as products of other resource equipment sectors.

Table 2

Value of Imports and Canadian Tariff Rates on Agricultural Machinery, Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Imports, 1993	Canada Tariff Rates	
			Before	After
		($ millions)	(percent)	
8432	agricultural, horticultural or forestry machinery for soil preparation or cultivation	147.5	free	free
8433	harvesting or threshing machinery, including straw or fodder balers; grass or hay mowers; machines for cleaning, sorting or grading eggs, fruit, etc.	728.5	free	free
8436.21	poultry incubators and brooders	22.2	free	free
8701.90	agricultural and forestry tractors	13.7	free	free

Materials Handling Equipment

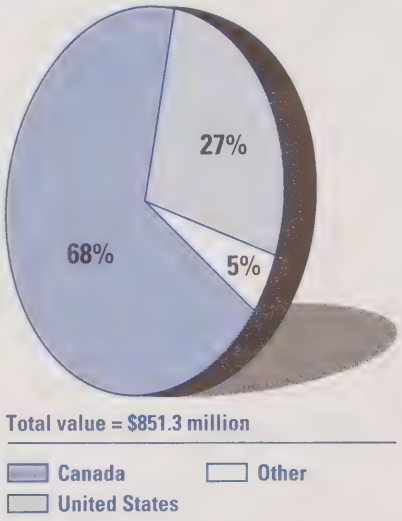
Importance to Canada

The materials handling equipment industry consists of firms that are primarily concerned with the manufacture of machinery and systems designed to lift, convey and position various materials or items. The industry also includes firms that make equipment used to transfer people and freight vertically. The industry is composed of four subsectors:

- conveyors and handling systems, including belt conveyors, stacker-reclaimers, shiploaders, feeders, pneumatic conveyors and radial stackers
- cranes and hoists, including overhead travelling bridge cranes, jib cranes, gantry cranes and winches
- industrial lift trucks, including pneumatic-tired counterbalanced forklifts, motorized pallet trucks, telescopic boom-type lift trucks, hand trucks and fork attachments
- elevators, including escalators and moving sidewalks.

The materials handling equipment industry shipped an estimated $850 million in 1991, the most recent year for which shipments data are available, and employed some 8 500 people. Most production facilities are located in Ontario, with significant manufacturing also taking place in the Prairies, Quebec and British Columbia. Exports amounted to some $265 million in 1991, with close to 90 percent destined for the U.S. market. Exports expressed as a percentage of shipments have declined from close 60 percent in the early 1980s to only 32 percent in 1991. This trend reflected the industry's increased focus on the growing needs of the Canadian market.

Figure 3
Destinations of Materials Handling Equipment Shipments, 1991



Strengths and Weaknesses

The Canadian industry is dominated by U.S. subsidiaries whose autonomy is restricted by mandates to serve the Canadian market or to operate within a rationalized manufacturing system organized on a North American basis. Most Canadian-owned companies have concentrated on improving their competitiveness in developing unique products or systems for niche markets.

Product quality, service and reputation are critical competitive factors in the conveyor and handling systems subsector, particularly for the larger projects. Large, complex conveyor systems require significant custom-engineering and attract worldwide competition from established

companies. Although Canadian companies have international capabilities in such systems, margins are often less attractive than those on domestic projects, as shipping costs are significant, and ongoing service coverage is required.

Canadian capabilities in the cranes and hoists subsector, particularly for heavy-duty bridge cranes, vehicle-mounted cranes and hydraulic winches, have proven to be internationally competitive in meeting specific customer requirements, although shipping costs are a significant element in pricing. Canadian firms have developed a well-established reputation for quality and custom designs, particularly for overhead bridge cranes and heavy-duty winches. There is some specialization in the more standard products such as utility cranes, lift platforms, hydraulic winches and crane carriers. With the exception of utility cranes and winches, the subsector does not manufacture pre-engineered standard products, for which demand has increased.

Of all the materials handling equipment subsectors, the development of market niches has been most successfully used in the industrial lift truck subsector. Most firms in Canada are competitive in adjacent North American markets, particularly for such types as pneumatic-tired rider units. At the same time, however, because the subsector has been rationalized to manufacture only a limited range of certain product types in Canada, there is concern that expansion of U.S. manufacturing capabilities by Japanese-based firms could adversely affect Canadian manufacturers.

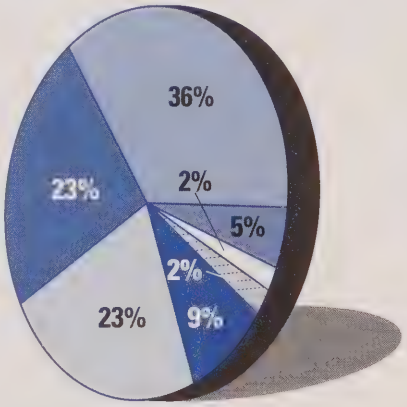
The Canadian elevator subsector producers offer a full range of products and have established a solid reputation for quality, safety and service. Worldwide rationalization of manufacturing has taken place in efforts to achieve economies of scale.

Trade Patterns and Performance

The importance of trade to the materials handling equipment industry has been declining in recent years, as firms have directed their attention to the domestic market.

Of the industry's $450 million of exports in 1993, 87 percent were directed to the U.S. market. Shipments to non-NAFTA countries in 1993 totalled some $59 million, of which 36 percent went to non-EU European countries, 23 percent to the EU, another 23 percent to Asian countries, and close to 9 percent to Central and South American destinations.

Figure 4
Materials Handling Equipment Exports to Non-NAFTA Destinations, 1993



While the U.S. will continue to be the focus of Canadian exports, opportunities will also prevail for Canadian products in some niche markets. In particular, eastern Europe will provide excellent market opportunities, as extensive industrial modernization is required. It must be recognized, however, that because certain materials handling equipment is often very heavy, shipping costs can impede Canadian access to more distant offshore markets.

The Canada-U.S. Free Trade Agreement eliminated the duties on all qualifying materials handling equipment traded between the two countries effective January 1, 1993.

Under the North American Free Trade Agreement, some Mexican tariffs on materials handling equipment were eliminated on implementation of the agreement on January 1, 1994. Others will be reduced over five and 10 years, being eliminated completely by January 1, 1998, or by January 1, 2003. Prior to the implementation of the NAFTA, Mexican import duties ranged from 10 to 20 percent. Canadian tariffs on most Mexican machinery imports were eliminated immediately under the NAFTA (on January 1, 1994), with all other tariffs to be removed by January 1, 1998. Canadian duty reductions under the NAFTA are being made from a base rate of 2.5 percent.

Prior to the replacement of the GATT with the World Trade Organization (WTO) on January 1, 1995, tariffs on materials handling equipment imported into Canada were either 9.2 or 9.3 percent. Comparable tariffs levied by Canada's major trading partners were 3.6 percent in the U.S., 3.4 percent in Japan and 4.1 to 5.8 percent in the EU. Developing countries enjoy preferential access into developed countries, with Canadian duties on their materials handling equipment currently being 2.5 percent.

An important feature regarding the dutiable status of materials handling machinery as well as most other machinery imports into Canada is the Machinery Program. The program came into effect in 1968 as part of Canada's commitments under the previous Kennedy Round of negotiations under the GATT, and provides remission of customs duties on a wide range of imported machinery when reasonably equivalent machinery is not available from Canadian production. The elimination of the Machinery Program is currently being examined in the context of the Department of Finance's tariff simplification exercise announced as part of the February 22, 1994, budget.

Non-tariff barriers (NTBs) are generally not a significant factor in Canada and the United States; product safety and performance standards are almost identical in both countries and are not a source of concern. Some Canadian safety standards are recognized as being more stringent and often exceed many local U.S. requirements, particularly those in the elevators subsector.

However, significant NTBs have limited Canadian access to other markets. For example, technical standards in the EU often differ from those in Canada. Some Canadian manufacturers have experienced difficulties in obtaining product certification, although some attempts are being made to standardize safety and design requirements. Similarly, Japanese product safety codes are elaborate and involve complicated processing procedures.

Impact of the Uruguay Round

Canada and other industrialized countries, including the EU, Japan, the United States, Republic of Korea and Norway, will be eliminating all tariffs for major materials handling products, including those applicable to:

- pulleys, tackles, most hoists, winches and capstans
- derricks, cranes and straddle carriers
- lifts, skip hoists, escalators and conveyors.

This dramatic trade-liberalizing initiative will facilitate access to important offshore markets, particularly in the expanding European market for specialized Canadian capabilities. The impact of these reductions will be most significant in those countries whose duties were relatively high when the Uruguay Round negotiations commenced. For example, Republic of Korea duties on material handling equipment, which will become free by January 1, 1999, had been 20 percent. While Australia will not be eliminating its duties on materials handling equipment, they will be reduced significantly, from the range of 15 to 40 percent to only 5 percent over the same period.

The elimination of U.S. duties applicable to imports from countries outside North America could affect Canadian exports to the U.S., which have been enjoying preferential access to that market since January 1, 1989, under the FTA.

Duties on fork-lift trucks, a major element of materials handling equipment production in Canada as well as in other industrialized countries, will not be eliminated as a result of the Uruguay Round negotiations. Rather, Canadian duties on fork-lift trucks will be reduced from current levels of 9.2 and 9.3 percent to 6.2 percent. By comparison, EU duties will be reduced insignificantly, from the current 4.1 and 4.9 percent to 4.0 and 4.5 percent, respectively.

The Uruguay Round's Agreement on Technical Barriers to Trade encourages countries to use international standards. The agreement will reduce the ability of countries to use technical regulations and standards or testing and certification procedures to obstruct trade.

The Agreement on Government Procurement should improve access to foreign governments' purchases of materials handling equipment. A new bid challenge mechanism will allow a firm having concerns that it has not been treated fairly on a bid to seek a timely review of the bidding process. Further, the new agreement will preclude participating governments from requiring industrial offsets (i.e. requirements from suppliers or service providers to establish a business or to manufacture or produce locally a specified value) as a condition for the purchase of equipment or services. The agreement contains new provisions covering construction contracts of federal departments and agencies above a value of approximately C$8.5 million, which is expected to provide opportunities for the subcontracting of machinery requirements.

The General Agreement on Trade in Services (GATS) negotiated as part of the Uruguay Round has made a number of significant improvements in the temporary movement of service suppliers. In this regard, most developed countries and a substantial number of developing countries have made commitments to provide access, on a temporary basis, for personnel seeking to develop business and also for certain professionals/specialists to undertake or complete work on a contract basis. The commitments made by GATS members on the temporary movement of service suppliers should prove beneficial to Canadian materials handling equipment firms in their pursuit of export markets.

Table 3
Value of Exports and Foreign Tariff Rates on Materials Handling Equipment,[a] Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Exports, 1993	European Union Tariff Rates		Australia Tariff Rates		Republic of Korea Tariff Rates	
			Before	After	Before	After (bound)	Before	After (bound)
		($ millions)	(percent)					
8425	pulley tackle and hoists; winches and capstans; jacks	77.6	4.1	free	25 (unbound)	5	20	free
8426	derricks; cranes; mobile lifting frames, straddle carriers and work trucks fitted with a crane	9.2	4.1 to 5.8	free	20 to 35 (unbound)	5	20	free
8427	fork-lift trucks; other work trucks fitted with lifting or handling equipment	134.1	4.1 to 4.9	free	25 (unbound)	15	20 to 30	13
8428	other lifting, handling, loading or unloading machinery (e.g. lifts, escalators, conveyors)	234.7	4.1 to 5.6	free	15 to 40 (unbound)	5	20	free
8431	parts of materials handling machinery	185.0	4.1 to 5.6	free	25 to 45 (bound and unbound)	5 to 18	20	free to 13

[a] The HS codes, product descriptions and figures shown may include products of this sector as well as products of other resource equipment sectors.

Table 4
Value of Imports and Canadian Tariff Rates on Materials Handling Equipment,
Before and After Implementation of the World Trade Organization

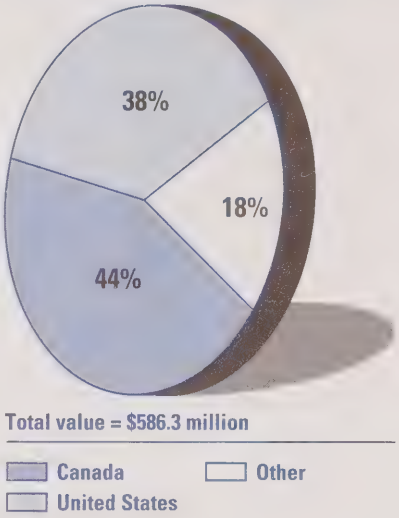
HS Code	Product Description (major products)	Value of Imports, 1993	Canada Tariff Rates	
			Before	After
		($ millions)	(percent)	
8425	pulley tackle and hoists; winches and capstans; jacks	90.9	9.2	free
8426	derricks; cranes; mobile lifting frames, straddle carriers and work trucks fitted with a crane	90.2	9.2	free
8427	fork-lift trucks; other work trucks fitted with lifting or handling equipment	154.5	9.2 to 9.3	6.2
8428	other lifting, handling, loading or unloading machinery (e.g. lifts, escalators, conveyors)	241.7	9.2	free
8431	parts of materials handling machinery	230.9	9.2 to 9.3	free to 6.2

Construction Machinery

Importance to Canada

The Canadian construction machinery industry comprises firms that produce large, wheeled vehicles and parts used in such diverse operations as excavating, road building and heavy hauling. These firms tend to specialize in one of four groups of products. The largest subsector, accounting for 90 percent of Canadian production, produces earth-moving machinery including excavators, loaders, bulldozers and graders. The other three subsectors produce asphalt machinery (including pavers and road repair equipment), concrete machinery (mixers, block-making machines and concrete production plants), and other on-road equipment (such as road rollers).

Figure 5
Destinations of Construction Machinery Shipments, 1991



Shipments of construction equipment in 1991, the most recent year for which shipments data are available, are estimated to be $586 million, with exports of $364 million representing 62 percent of these shipments. Much of this activity is highly concentrated, with 10 of the largest firms accounting for up to 75 percent of total shipments. The industry is centred mainly in Ontario, although there is considerable activity across Canada.

Strengths and Weaknesses

Most firms in the industry focus on supplying the Canadian market, and compete on the basis of their ability to provide service and parts. These firms tend to be small to medium-sized, usually serving a well-defined geographic area within Canada and rarely pursuing export market opportunities.

At the same time, there are a relatively few companies in the industry that produce mainly for the export market. These firms, which dominate overall Canadian production, have succeeded by specializing in exploitation of well-defined market segments in rubber-tired, earth-moving, construction machines, including road graders, asphalt pavers and skid steer loaders. By establishing a product niche or by rationalizing production, they are able to maintain competitive prices, an important factor in the construction machinery market. The high level of specialization within the Canadian industry has led to significant imports into Canada, and imports of complete machines make up over 90 percent of the Canadian market. Imports are concentrated in hydraulic excavators, front-end loaders and loader-backhoes.

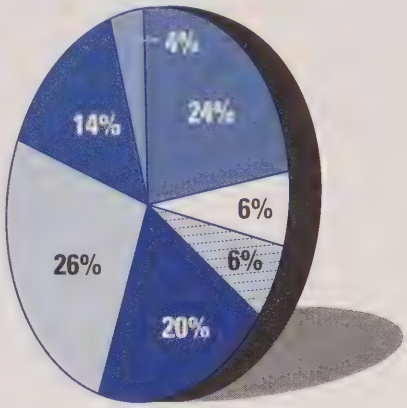
Trade Patterns and Performance

Export sales will continue to be of vital importance to those firms that have specialized products. Sales to the U.S. market, which traditionally account for 75 percent of industry exports, reached over $300 million in 1993. Exports to non-NAFTA countries totalled some $97 million, with sales principally to Asian markets (26 percent), Middle East and African countries (24 percent), Central and South American countries (20 percent) and the EU (14 percent).

Under the Canada-U.S. Free Trade Agreement, virtually all qualifying construction machinery traded between the two countries became duty-free effective January 1, 1993.

Under the North American Free Trade Agreement, some Mexican tariffs on construction machinery were eliminated on implementation of the agreement on January 1, 1994, while others will be reduced over five and 10 years, being eliminated completely by January 1, 1998 or by January 1, 2003. Prior to NAFTA, Mexican import duties ranged from 10 to 20 percent. Canadian tariffs on most Mexican machinery imports were eliminated immediately upon implementation of the NAFTA on January 1, 1994, with all other tariffs to be removed by January 1, 1998. Canadian duties applicable to Mexican imports (which are the basis for NAFTA tariff phasing) are 2.5 and 6.5 percent.

Figure 6
Construction Machinery Exports to Non-NAFTA Destinations, 1993



Prior to the replacement of the GATT with the WTO on January 1, 1995, tariffs on construction machinery imported into Canada ranged from free to 10.2 percent. Comparable tariffs by Canada's major trading partners were 2.5 to 3 percent in the U.S., zero to 4.9 percent in Japan and 2.9 to 6.5 in the EU. Developing countries enjoy preferential access into developed countries, with Canadian duties on these imports currently at 2.5 percent.

As noted for materials handling equipment, an important feature regarding the dutiable status of machinery imports into Canada is the Machinery Program, which provides duty relief on imported machinery not available from Canadian producers. The operation of the Machinery Program is of particular significance given the highly specialized nature of Canadian construction equipment capability and the required reliance on imports. Under the program, Canadian manufacturers are given tariff protection only for those products that they produce, while machinery users are able to acquire equipment not produced in Canada at the lowest possible cost.

Non-tariff barriers also affect trade in construction machinery. Product certifications necessary to enter the EU have been difficult to obtain for new products, and Japanese product safety codes are elaborate and involve long processing times.

Impact of the GATT Uruguay Round

One of the most notable accomplishments of the Uruguay Round negotiations was the elimination of duties on virtually all construction equipment by most industrialized countries, including Canada. While these reductions are significant in terms of their impact on overall world trade in these products, the elimination of duty in most industrialized countries is not expected to offer significant new market opportunities for Canadian construction equipment firms, as most duties applied in these markets were already under 5 percent. For some countries such as Republic of Korea, the elimination of duties, which for the most part were 20 percent, represents potential new growth opportunities for the Canadian industry.

The elimination of U.S. duties applicable to imports from countries outside North America could affect Canadian exports to the U.S., which have been enjoying preferential access to that market since January 1, 1989, under the FTA.

Similarly, the high duty structure for construction equipment into Australia (i.e. ranging to upward of 30 percent), which will be reduced significantly as a result of the Uruguay Round negotiations to rates ranging from free to mainly 5 percent, will also provide significantly improved market prospects for Canadian firms.

Developing countries in Asia, the Middle East and Africa as well as in Central and South America have been important export markets for Canadian construction equipment firms. The success of the Uruguay Round negotiations in binding the duties of developing countries should prove beneficial by providing improved security of access to these markets for Canadian firms.

For Canadian firms oriented toward the domestic market, the elimination of duty protection will require them to address significant adjustment issues in order to remain competitive and take advantage of growth opportunities within North America and in offshore markets.

At the same time, construction firms and other users of this equipment may benefit from lower prices.

The Uruguay Round's Agreement on Technical Barriers to Trade encourages countries to use international standards. The agreement will reduce the ability of countries to use technical regulations and standards or testing and certification procedures to obstruct trade.

An important segment of the construction equipment market involves sales to governments for such things as highway construction and maintenance. The Agreement on Government Procurement should improve access to foreign governments' purchases of construction machinery. A new bid challenge mechanism will allow a firm having concerns that it has not been treated fairly on a bid to seek a timely review of the bidding process. Further, the new agreement will

preclude participating governments from requiring industrial offsets (i.e. requirements from suppliers or service providers to establish a business or to manufacture or produce locally a specified value) as a condition for the purchase of equipment or services. The agreement contains new provisions covering construction contracts of federal departments and agencies above a value of approximately C$8.5 million, which is expected to provide opportunities for the subcontracting of machinery requirements.

Table 5
Value of Exports and Foreign Tariff Rates on Construction Machinery,[a]
Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Exports, 1993	European Union Tariff Rates		Australia Tariff Rates		Republic of Korea Tariff Rates	
			Before	After	Before	After (bound)	Before	After (bound)
		($ millions)	(percent)					
8429	self-propelled bulldozers, angledozers, graders, levellers, scrapers, mechanical shovels, excavators, shovel loaders, tamping machines and road rollers	152.1	3.8 to 6.5	free	5 to 30 (bound)	free to 5	10.2 to 20	free
8430.41	boring or sinking machines, self-propelled	17.4	6.5	free	22.5 (bound) (Canadian rate 12.5)	5	20	free
8431.49	parts of cranes, work trucks, shovels and other construction machinery	137.6	5.2	free	20 (bound)	5	20	free
8474.31	concrete or mortar mixers	4.7	3.0	free	25 (unbound)	5	20	13

[a] The HS codes, product descriptions and figures shown may include products of this sector as well as products of other resource equipment sectors.

Table 6

Value of Imports and Canadian Tariff Rates on Construction Machinery, Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Imports, 1993	Canada Tariff Rates	
			Before	After
		($ millions)	(percent)	
8429	self-propelled bulldozers, angledozers, graders, levellers, scrapers, mechanical shovels, excavators, shovel loaders, tamping machines and road rollers	786.9	free to 10.3	free
8430.41	boring or sinking machines, self-propelled	21.0	free	free
8431.49	parts of cranes, work trucks, shovels and other construction machinery	321.8	free	free
8474.31	concrete or mortar mixers	3.7	9.2	free

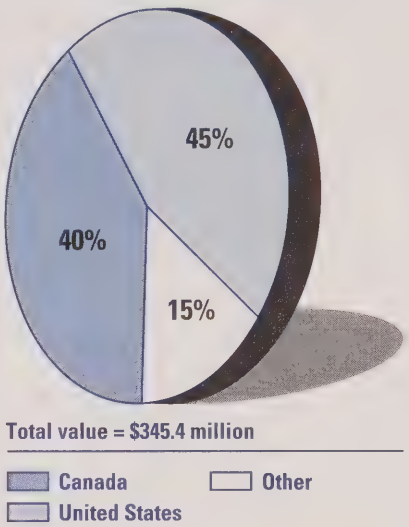
Mining Equipment

Importance to Canada

The mining equipment industry is composed of manufacturers of equipment used by mining companies for the exploration, development and operation of mines as well as for concentrating, refining and smelting mined material. A wide variety of mining equipment is manufactured in Canada for such uses as exploration and geophysical work, drilling, underground and open pit mining, ore concentrating and smelting, and coal preparation.

Shipments of Canadian-manufactured mining equipment in 1991, the most recent year for which shipments data are available, are estimated at $345 million. In that year, exports were valued at $208 million, accounting for 60 percent of shipments, of which nearly half went to the United States. Most of the exports were rock-drilling and earth-boring equipment.

Figure 7
Destinations of Mining Equipment Shipments, 1991



The Canadian mining equipment manufacturing industry consisted of approximately 175 establishments in 1991 located primarily in Ontario and Quebec, with substantial activity in western Canada. There are only a few mining machinery producers in Atlantic Canada.

Strengths and Weaknesses

The strength of the Canadian mining equipment industry is its ability to respond to the high degree of product innovation demanded by the mining industry. Customizing of equipment is a more important factor than economies of scale. Accordingly, the small size of the Canadian market, which has a negative impact in other resource equipment markets, is not an important competitive factor facing Canadian mining equipment firms.

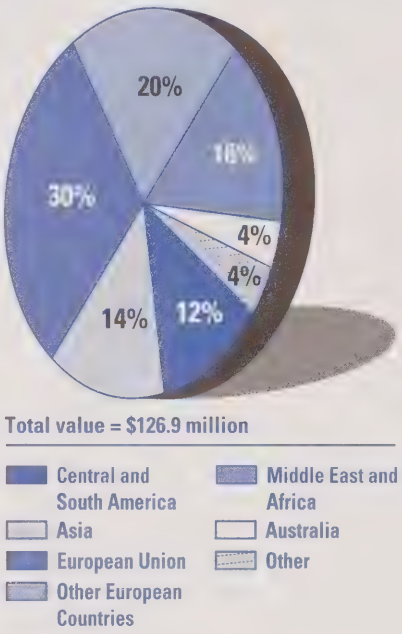
The dominance of foreign-owned (mainly U.S.) engineer-procure-construct (EPC) companies in large-scale mining projects and the relatively small number of Canadian EPC firms have had a negative impact on the Canadian mining equipment industry, both domestically and internationally. These foreign EPC firms generally favour equipment manufactured in their own country because of previous alliances and equipment familiarity. Canadian suppliers of mining equipment may not be considered or may be screened out by the purchasing groups of foreign-operated EPC firms, whether or not the foreign EPC firm has a sales office in Canada.

Trade Patterns and Perfomance

The Canadian mining equipment industry generally competes successfully in the global marketplace, with the exception of certain markets such as Europe and Brazil, which are difficult to penetrate because of tariffs and NTBs. Securing export opportunities is of critical importance to the long-term viability of the mining equipment industry.

Sales to the U.S. market, traditionally accounting for less than 50 percent of industry exports in recent years, reached some $81 million in 1993. Exports to non-NAFTA countries totalled $127 million in 1993, with sales principally to EU markets (30 percent), other European countries (20 percent), Middle East and African countries (16 percent) and Central and South American countries (12 percent).

Figure 8
Mining Equipment Exports to Non-NAFTA Destinations, 1993



Under the Canada-U.S. Free Trade Agreement, all qualifying mining equipment traded between the two countries became duty-free effective January 1, 1993.

Under the North American Free Trade Agreement, some Mexican tariffs on mining equipment were eliminated upon implementation of the agreement on January 1, 1994, while others will be reduced over five and 10 years, being eliminated completely by January 1, 1998, or by January 1, 2003. Prior to the implementation of the NAFTA, Mexican import duties ranged from 10 to 20 percent. Canadian tariffs on most Mexican mining machinery imports were eliminated immediately under the NAFTA on January 1, 1994, with the few that remain to be removed by January 1, 1998. The phased elimination of Canadian duties applied to Mexican mining equipment imports are from a base of 2.5 percent.

Prior to the replacement of the GATT with the WTO on January 1, 1995, duties on mining equipment imported into Canada ranged from free to 9.2 percent. Comparable tariffs by Canada's major trading partners were from 2 to 7.2 percent in the U.S., and from 2.9 to 6.5 percent in the EU. Most developing countries maintain relatively high tariffs. For example, duties on mining equipment in Chile and Brazil are 20 percent. At the same time, developing countries enjoy preferential access into developed countries. Canadian duties on imports from developing countries are currently 2.5 percent.

Canadian manufacturers have experienced some difficulty competing in the EU country markets resulting from government practices involving offsets and preferential buying practices on sales to state-owned mines.

Impact of the GATT Uruguay Round

The success of the Uruguay Round negotiations in eliminating duties on mining equipment by most major industrialized countries will provide Canadian firms with access to export markets that are vital to its future prospects. As was the case with construction and materials handling equipment, Canada and its major industrialized trading partners agreed to eliminate tariffs for the principal categories of mining equipment. In addition, other countries that are of particular export interest for Canadian firms will also reduce their duties on mining equipment. For example, Australia will make substantial reductions in its mining equipment duties, cutting current duties from a range of 8 to 25 percent to a range of free to 5 percent.

The elimination of U.S. duties applicable to imports from countries outside North America could affect Canadian exports to the U.S. which have been enjoying preferential access to that market since January 1, 1989, under the FTA.

Sales to developing countries are important to Canadian mining equipment firms. Notwithstanding relatively high rates of duties maintained by developing countries, modest tariff reductions and the binding of duties on mining equipment should improve the access enjoyed by Canadian firms in these markets.

The General Agreement on Trade in Services (GATS) negotiated as part of the Uruguay Round has made a number of significant improvements in the temporary movement of service suppliers. In this regard, most developed countries and a substantial number of developing countries have made commitments to provide access, on a temporary basis, for personnel seeking to develop business and also for certain professionals/specialists to undertake or complete work on a contract basis. The commitments made by GATS members on the temporary movement of service suppliers should prove beneficial to Canadian mining equipment firms in their pursuit of export markets.

The Agreement on Government Procurement is not expected to have an impact on mining machinery, as entity coverage under the agreement by participating countries does not extend to government-controlled mines.

Table 7

Value of Exports and Foreign Tariff Rates on Mining Equipment,[a]

Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Exports, 1993	European Union Tariff Rates		Australia Tariff Rates		Norway Tariff Rates	
			Before	After	Before	After (bound)	Before	After (bound)
		($ millions)	(percent)					
8207.12	rock drilling or earth-boring tools with working part of material other than sintered metal cermets	9.3	5.1	2.7	15 (unbound) (Canadian rate 9)	9	6.2	4
8430.31	coal or rock cutters, self-propelled	25.4	6.5	free	8 (bound)	15 (unbound)	6.5	free
8430.49	boring or sinking machinery, not self-propelled	16.7	2.9	free	22.5 (bound)	free	5.3	free
8474.10	sorting, screening, separating or washing machines for stone/ores or other minerals	7.3	3.0	free	15 (unbound)	5	6.2	free
8474.20	crushing/grinding machines for earth/stones/ ores or other mineral substances	5.8	3.0	free	15 to 20 (unbound)	5	6.2	free
8474.90	parts of machines of 8474.10 and 8474.20	45.8	3.0	free	15 to 25 (unbound)	5	6.2	free

[a] The HS codes, product descriptions and figures shown may include products of this sector as well as products of other resource equipment sectors.

Table 8
Value of Imports and Canadian Tariff Rates on Mining Equipment, Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Imports, 1993	Canada Tariff Rates	
			Before	After
		($ millions)	(percent)	
8207.12	rock drilling or earth-boring tools with working part of material other than sintered metal cermets	71.9	free	free
8430.31	coal or rock cutters, self-propelled	11.0	free to 9.2	free
8430.49	boring or sinking machinery, not self-propelled	20.2	free	free
8474.10	sorting, screening, separating or washing machines for stone/ores or other minerals	16.6	9.2	free
8474.20	crushing/grinding machines for earth/stones/ ores or other mineral substances	19.1	5.5 to 9.2	free
8474.90	parts of machines of 8474.10 and 8474.20	81.7	free to 9.2	free

Forestry Equipment

Importance to Canada

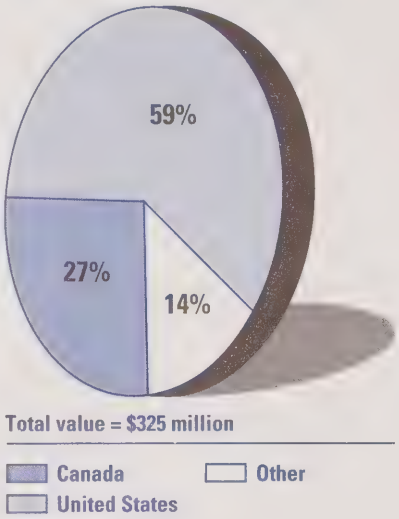
The forestry equipment industry produces machinery, equipment and tools for use by forest companies. These products extract commercial wood from forest stands, process the wood into forms usable for secondary processing, assist rapid reforestation of the logged areas and treat growing stands. The principal users of this equipment, directly or through specialized subcontractors, are forest industry firms, including those producing primarily lumber, pulp and paper, or both, as well as provincial governments.

The main types of forestry equipment are feller-bunchers, skidders and forwarders (specialized tractors), yarders, delimbers, multi-function machines, log loaders, slashers, scarifiers, planting machines and specialized attachments or accessories.

Shipments of forestry equipment are highly cyclical; they have been estimated at $325 million in 1990, the most recent year for which these shipment data are available. Exports during that year represented some 73 percent of industry shipments, reaching $237 million. Some 81 percent of these exports were shipped to the United States.

The forestry equipment manufacturing industry in 1990 consisted of approximately 40 firms, located primarily in Quebec, Ontario and British Columbia.

Figure 9
Destinations of Forestry Equipment Shipments, 1990



Strengths and Weaknesses

The Canadian forestry equipment industry is highly competitive in the domestic market because of its comprehensive range of innovative machinery, its ability to adapt to changing markets and its close ties with the Canadian logging industry.

Canadian producers compete with U.S. manufacturers in the Canadian and U.S. markets more on the basis of service, technology, reliability and quality than on price.

The current range of Canadian products is especially well suited to conditions in the major government-owned forests of eastern Europe and the Commonwealth of Independent States (CIS) because the tree species, soils, topography, climate and harvesting methods are very similar to those in Canada.

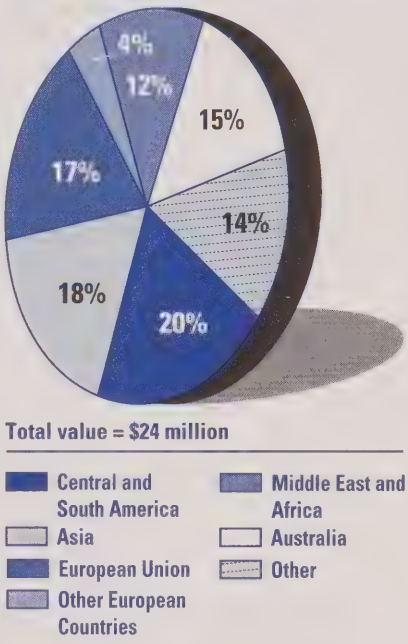
Trade Patterns and Performances

Canadian skidders can be used in any forest, regardless of tree species. But Canadian fellers, delimbers and slashers are designed for trees less than one metre in diameter that have relatively low wood density. Although these three types of machines cannot be used for logging the dense, large-diameter trees found in tropical hardwood forests, they are suitable for planted forests of eucalyptus, rubber trees and coniferous trees anywhere in the world where the scale of operations is adequate. There are many countries, however, where the forest resources are broken up into small management units, thus eliminating those countries as potential markets for the kind of equipment made in Canada.

Sales to the U.S. market have traditionally accounted for the vast majority of total industry exports, amounting to $192 million or 81 percent of industry exports in 1990. In 1993, exports to the U.S. reached $318 million. Exports to non-NAFTA countries totalled only $24 million, with sales principally to Central and South American countries (20 percent), Asia (18 percent), the EU (17 percent) and Australia (15 percent).

A number of developing countries are striving for self-sufficiency in forest products and have planted new forests and built new forest-products processing plants. These new users will be looking for highly productive logging equipment and will provide Canadian forestry equipment firms with new market opportunities through the next decade.

Figure 10
Forestry Exports to Non-NAFTA Destinations, 1993



In the CIS and eastern Europe, Canadian products have the sturdiness and productivity needed to log the large, government-owned forests. Access to these markets are currently constrained as a result of virtually non-existent or European-controlled distribution networks for forestry equipment.

Many types of Canadian machines are competitive in Japan, Australia and New Zealand.

Under the Canada-U.S. Free Trade Agreement, virtually all qualifying forestry equipment traded between the two countries became duty-free effective January 1, 1993. However, Canadian tariffs on U.S. log skidders will not become duty-free until January 1, 1998. Canadian skidders, as well as those from other countries imported into the U.S., have enjoyed a long-standing duty-free status.

Under the North American Free Trade Agreement, some Mexican tariffs on forestry equipment were eliminated on implementation of the agreement on January 1, 1994, while virtually all others will be reduced over five years, being eliminated completely by January 1, 1998. Prior to NAFTA implementation, Mexican import duties ranged from 10 to 20 percent. Canadian tariffs on most Mexican forestry machinery imports were eliminated immediately under the NAFTA on January 1, 1994, with all other tariffs to be removed by January 1, 1998.

Prior to the replacement of the GATT with the WTO on January 1, 1995, tariffs on forestry equipment imported into Canada ranged from free to 9.2 percent. Forestry equipment imported into Canada is eligible for duty remission if no equivalent Canadian equipment is available. In practice, most Canadian imports of forestry equipment are eligible for duty remission, since the forestry industry generally uses Canadian equipment first and imports only those specialized pieces of equipment that are not available in Canada. In non-North American markets, Canadian firms encountered duty levels such as 3.5 to 11 percent in the EU, free to 40 percent in Australia, and 20 percent in Brazil and Chile.

Impact of the GATT Uruguay Round

The Uruguay Round negotiations are expected to have a substantial positive impact on Canada's forestry equipment industry exports, helping firms diversify beyond the U.S. market.

Canada's major trading partners will eliminate or significantly reduce their tariffs on forestry equipment over a five-year period. The EU will eliminate its duties on certain log-handling equipment, tree-felling machines and attachments, chippers and other wood-processing machines, while reducing its duty on log skidders from 11 percent to 7 percent. Australia will also make significant reductions in its duties, cutting duties ranging from mostly 15 to 40 percent to 5 to 15 percent. Reductions to be made by New Zealand will see duties reduced from 5 to 38 percent to a range of free to 23 percent; log skidders will become duty-free.

Table 9

Value of Exports and Foreign Tariff Rates on Forestry Equipment,[a]

Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Exports, 1993	European Union Tariff Rates		Australia Tariff Rates		New Zealand Tariff Rates	
			Before	After	Before	After (bound)	Before	After (bound)
		($ millions)	(percent)					
8428.90	lifting, handling, loading or unloading machinery, not elsewhere specified	136.3	4.1	free	15 to 40 (unbound)	5	35	23
8436.80	forestry, agricultural, horticultural machinery	70.0	3.5	free	15 (bound)	7	20 (unbound)	16.5
8465.91	sawing machines	14.3	5.8	free	25 (unbound)	15	38 (unbound)	25
8701.90	agricultural and forestry tractors (log skidders)	225.0	11.0	free	20 (bound) (Canadian rate 12.5)	5	5	free

[a] The HS codes, product descriptions and figures shown may include products of this sector as well as products of other resource equipment sectors.

Table 10

Value of Imports and Canadian Tariff Rates on Forestry Equipment, Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Imports, 1993	Canada Tariff Rates	
			Before	After
		($ millions)	(percent)	
8428.90	lifting, handling, loading or unloading machinery, not elsewhere specified	73.77	9.2	free
8436.800	forestry, agricultural, horticultural machinery	77.4	9.2	6.1
8465.91	sawing machines	69.2	free to 9.2	free to 6.1
8701.90	agricultural and forestry tractors (log skidders)	563.2	8	free

Oil and Gas Field Equipment

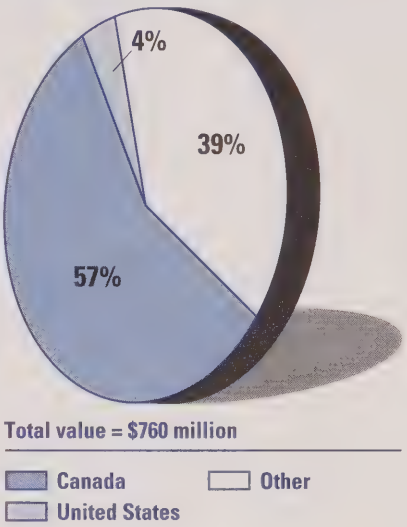
Importance to Canada

Manufacturers of oil and gas field equipment in Canada produce a wide variety of machinery and components used in exploring for oil and gas deposits, in drilling and servicing wells, and in producing and initially processing oil and gas in the field. The industry encompasses manufacturers of geophysical prospecting equipment; drilling rigs and ancillary tools; pumping, cementing and well-fracturing units; and dehydrators, separators, treaters and other field processing components. It also includes drilling and processing equipment on offshore platforms, but does not include the platforms or subsea equipment. In addition, manufacturers supply custom-made equipment, such as drilling rigs and field processing units, plus a wide range of standard products and high-volume production items.

Total industry shipments in 1991, the most recent year for which these data are available, were estimated to be $760 million, of which some $330 million, or 43 percent, were exports. This represented a sharp increase in export orientation from 27 percent in 1986. This trend reflects a greater reliance on exports as domestic drilling declined and then stabilized.

The industry in 1991 was composed of approximately 200 small to medium-sized firms concentrated mainly in Alberta.

Figure 11
Destinations of Oil and Gas Field Equipment Shipments, 1991



Strengths and Weaknesses

The Canadian industry is strong in the areas of technology, product quality and after-sales service. This is particularly true in specialized equipment developed to accommodate Canada's resource characteristics, especially for heavy oil, sour gas and oil sands. This equipment is internationally competitive and is being exported to other nations that have similar reserves, such as India, China and the Commonwealth of Independent States (CIS).

Canadian firms, often in cooperation with their key customers, have developed advanced technologies related to drilling as well as specialized recovery and processing products, including equipment and techniques for secondary recovery from low-productivity wells, sour gas gathering and treatment facilities, slant-hole drilling rigs and horizontal drilling, and subsurface mining equipment for extracting oil sands.

The industry has been able to maintain its viability and expand exports despite the downturn in equipment requirements through productivity improvements resulting from rationalization and automation. However, the industry's higher cost structure relative to its U.S. competitors and the relatively small Canadian market relative to its international competitors create competitive disadvantages in those lines of products where economies of scale are important (e.g. drill bits, fishing tools, packers and drill collars). To some extent, the elimination of duties on such equipment under the FTA has been alleviating this problem.

Trade Patterns and Performance

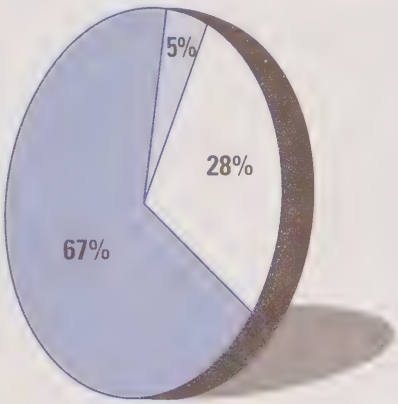
Trade has become increasingly important to the Canadian oil and gas equipment industry. Of industry exports totalling an estimated $500 million in 1993, the CIS, southern Asia and China accounted for some 60 percent, South America, the Middle East and Africa for 25 percent, the United States for 10 percent, and the EU for 5 percent.

A major industrial development opportunity for the Canadian oil and gas field equipment manufacturers lies in overseas markets in India, China, the CIS and the Middle East, where there is a growing interest in Canadian-developed technologies for sour gas and heavy oil treatment.

Some Canadian firms have been positioning themselves to take advantage of European economic integration by establishing manufacturing operations, sales offices or joint venture and licensing arrangements with European firms. Canadian companies can also expect to benefit from increased business opportunities in the eastern European countries, which liberalized ownership and joint venture laws. This applies to the CIS, Poland, Hungary and Romania, which all have indigenous oil and gas industries.

The industry in Canada has developed with virtually no tariff protection. Under the FTA, all U.S. oil and gas equipment duties and those remaining Canadian duties were removed on January 1, 1993.

Figure 12
Oil and Gas Field Equipment Exports to Non-NAFTA Destinations, 1993



Total value = $450 million

Asia (including the CIS)
European Union
Other

Under the NAFTA, some Mexican tariffs on oil and gas equipment were eliminated upon implementation of the agreement on January 1, 1994, while others will be reduced over five and 10 years, being eliminated completely by January 1, 1998, or by January 1, 2003. Prior to implementation of the NAFTA, Mexican import duties ranged from 10 to 15 percent. The NAFTA agreement on government procurement for the first time will provide Canadian firms fair opportunities to bid on contracts by Mexico's state-owned oil company, PEMEX.

State-owned oil companies, such as those of France, Italy, Brazil and Mexico, all have had policies favouring their domestic equipment manufacturers. The United Kingdom and Norway also have mechanisms in place that favour domestic producers.

As noted, virtually all imports into Canada of oil and gas field equipment are duty-free. Prior to the replacement of the GATT with the WTO on January 1, 1995, EU tariffs ranged from 2.9 to 6.5 percent. In a number of instances, countries where Canadian exporters have export interests had maintained relatively high duty levels, as they now are or are just emerging from being state-controlled economies or are developing-country economies. However, trade barriers in these countries (e.g. India, China and the CIS) have not been major impediments to Canadian exports.

Impact of the GATT Uruguay Round

The Uruguay Round is not expected to have a significant impact on the Canadian oil and gas field equipment industry, since most countries of export interest to Canadian oil and gas equipment firms are either developing countries or are not yet members of the GATT/WTO.

Developing countries for the most part made only modest duty reductions as a result of the Uruguay Round negotiations, although they did commit to significant undertakings to bind their duties. While the binding of duties will provide for improved security of access to these markets, they are unlikely to result in new opportunities for Canadian firms.

Countries such as China and members of the CIS are not GATT members. However, since most are in the process of seeking GATT/WTO membership, there is scope to enhance access to these markets by reducing duties of particular export interest to Canadian firms.

Notwithstanding the foregoing, there are a number of noteworthy concessions made by Uruguay Round participants that should prove beneficial to Canadian oil and gas equipment exporters. In this regard, both the EU and Norway will be eliminating their duties on drilling equipment. As well, India has reduced its duty on drilling equipment from 45 percent to 25 percent.

In addition, the General Agreement on Trade in Services (GATS), negotiated as part of the Uruguay Round, has made a number of significant improvements in the temporary movement of service suppliers. In this regard, most developed countries and a substantial number of developing countries have made commitments to provide access, on a temporary basis, for personnel seeking to develop business and also as for certain professionals/specialists to undertake or complete work on a contract basis. The commitments made by GATS members on the temporary movement of service suppliers should prove beneficial to Canadian oil and gas field equipment firms in their pursuit of export markets.

Table 11

Value of Exports and Foreign Tariff Rates on Oil and Gas Field Equipment,[a] Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Exports, 1993	European Union Tariff Rates		India Tariff Rates		Norway Tariff Rates	
			Before	After	Before	After	Before	After
		($ millions)	(percent)					
8207.11	rock drilling or earth-boring tools with working part of sintered metal carbide or cermets	0.4	4.6	2.7	60.0	60.0	4.5	4.0
8207.12	rock drilling or earth boring tools with working part of other material (i.e. other than of sintered metal carbide or cermets)	9.3	4.6 to 5.1	2.7	45	25	6.2	4.0
8430.41	other boring or sinking machinery, self-propelled	17.4	6.5	free	45	25	5.3	free
8430.49	other boring or sinking machinery, not self-propelled	16.7	2.9	free	45	25	5.3	free
8431.43	parts of boring or sinking machinery of subheading 8430.41 or 8430.49	87.8	2.9	free	45	25	5.3	free

[a] The HS codes, product descriptions and figures shown may include products of this sector as well as products of other resource equipment sectors.

Table 12
Value of Imports and Canadian Tariff Rates on Oil and Gas Field Equipment, Before and After Implementation of the World Trade Organization

HS Code	Product Description (major products)	Value of Imports, 1993	Canada Tariff Rates	
			Before	After
		($ millions)	(percent)	
8207.11.10	rotary rock frill bits; augers, other than those used in the exploration or drilling for water	21.1	free	free
8207.12.10	rotary rock drill bits; non-diamond type core drill bits of a kind used in the exploration or drilling for water, oil or natural gas; augers, other than those used in the exploration or drilling for water	63.0	free	free
8430.41.20	. . . stoper drills . . . to be employed in the exploration or drill for oil, natural gas . . . , self-propelled	4.7	free	free
8430.41.50	drilling or work-over rigs . . . to be employed in the exploration, discovery, development, maintenance, testing, depletion or production of oil or natural gas wells . . . self-propelled	0.7	free	free
8430.49.20	. . . stoper drills . . . to be employed in the exploration or drill for oil, natural gas . . . , not self-propelled	1.4	free	free
8430.49.50	drilling or work-over rigs . . . to be employed in the exploration, discovery, development, maintenance, testing, depletion or production of oil or natural gas wells . . . not self-propelled	4.0	free	free
8431.43.10	rotary tables, power turntables, swivels, elevators and elevator links	10.7	free	free
8431.43.20	parts of the goods of tariff item 8430.41.20 . . .	17.8	free	free
8431.43.30	parts of the goods of tariff item 8430.41.50 . . .	28.9	9.2	free